AUTHOR: SFC NORMAN M. VANCE

W221
ELO F, Polar Coordinates

MAP READING

ELO F/W221, OCT 03/VGT-1

POLAR COORDINATES

ACTION: DETERMINE POLAR COORDINATES.

CONDITIONS: IN A CLASSROOM ENVIRONMENT GIVEN A 1:50,000 'TENINO' MAP AND A GTA 5-2-12 COORDINATE SCALE.

STANDARD: DETERMINE THE POLAR COORDINATES BY PLOTTING AN AZIMUTH AND A DISTANCE FROM A KNOWN POINT ON A MAP IAW FM 3-25.26.
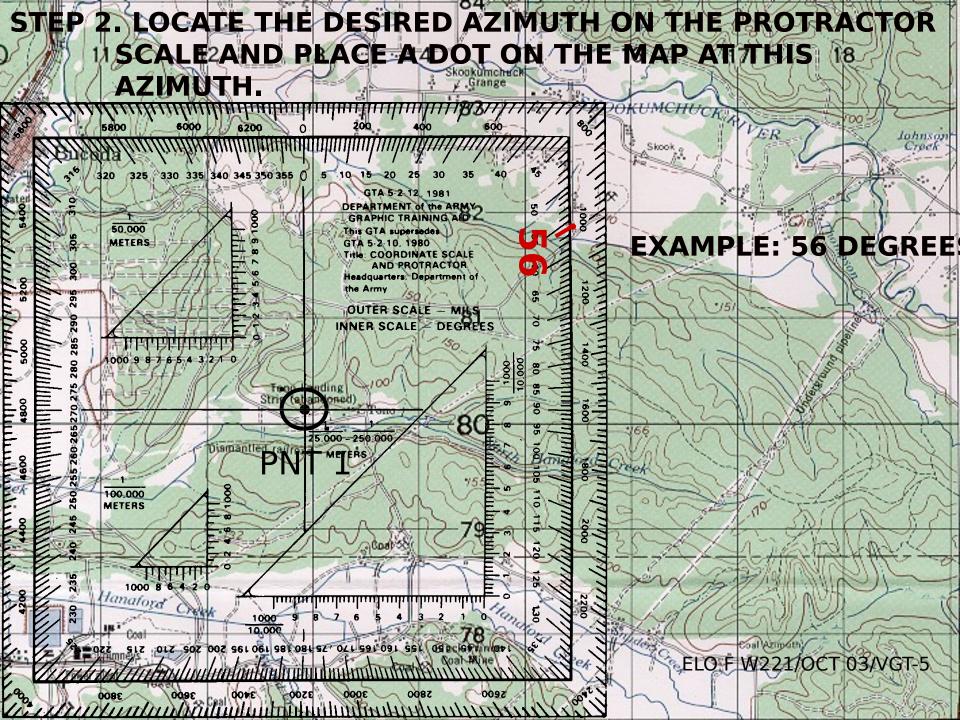
ELO F W221/OCT 03/VGT-2

POLAR COORDINATES

➢ **PLOT AZIMUTH FROM A KNOWN POINT.**

➢ **PLOT DISTANCE FROM THE KNOWN POINT ALON**
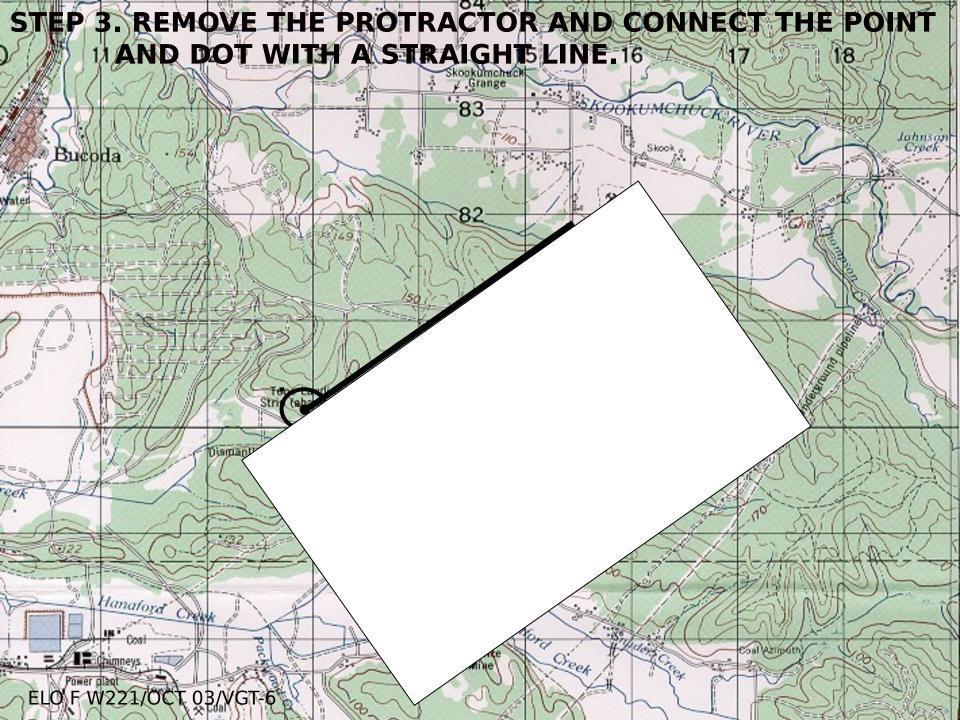**THE AZIMUTH LINE.**

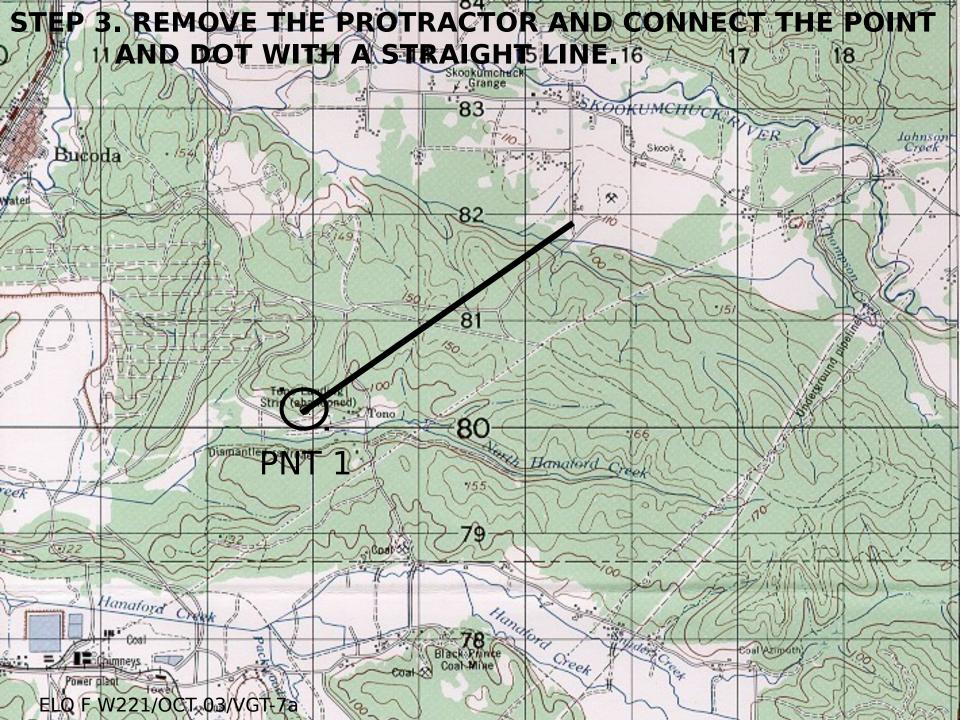➢ **THE POLAR COORDINATE IS AT THE END OF TH**
AZIMUTH/DISTANCE LINE.

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STEP 1. PLACE THE INDEX MARK OF THE PROTRACTOR AT THE CENTER OF MASS ON THE POINT FROM WHICH YOU ARE MEASURING.

PNT 1

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STEP 2. LOCATE THE DESIRED AZIMUTH ON THE PROTRACTOR SCALE AND PLACE A DOT ON THE MAP AT THIS AZIMUTH.

EXAMPLE: 56 DEGREES

PNT 1

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STEP 3. REMOVE THE PROTRACTOR AND CONNECT THE POINT AND DOT WITH A STRAIGHT LINE.

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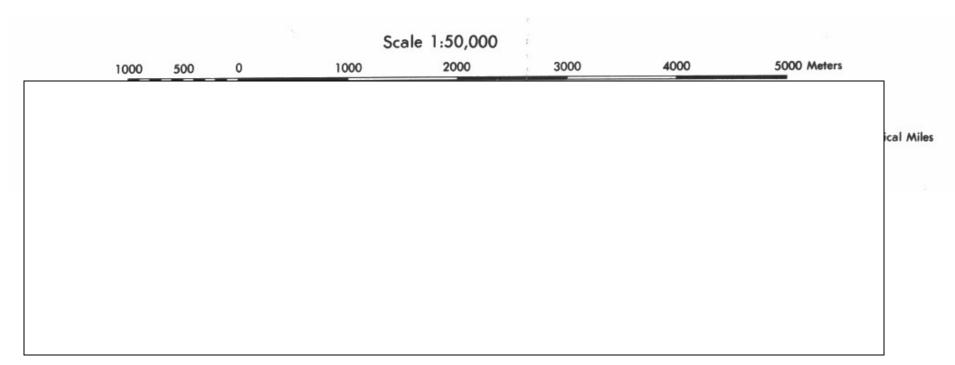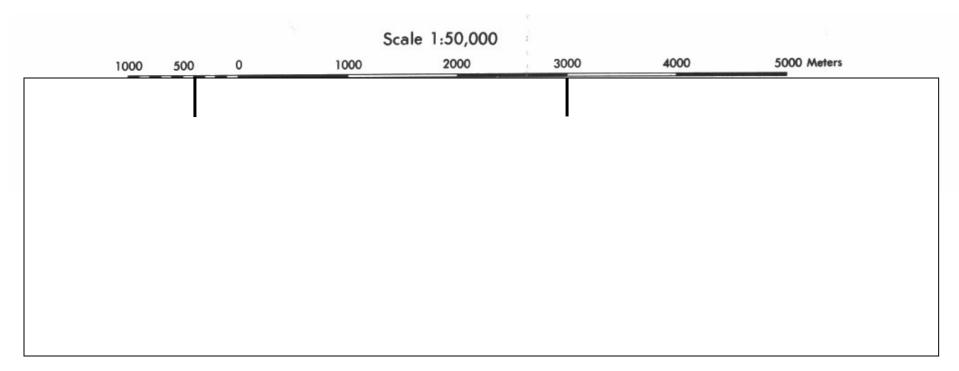
PNT 1

ELQ F W221/OCT 03/VGT-7a

STEP 1. SELECT THE APPROPRIATE SCALE MEASUREMENT AN
PLACE A PAPER STRAIGHT EDGE ON THE SCALE.

EXAMPLE: DISTANCE IN METERS

Scale 1:50,000

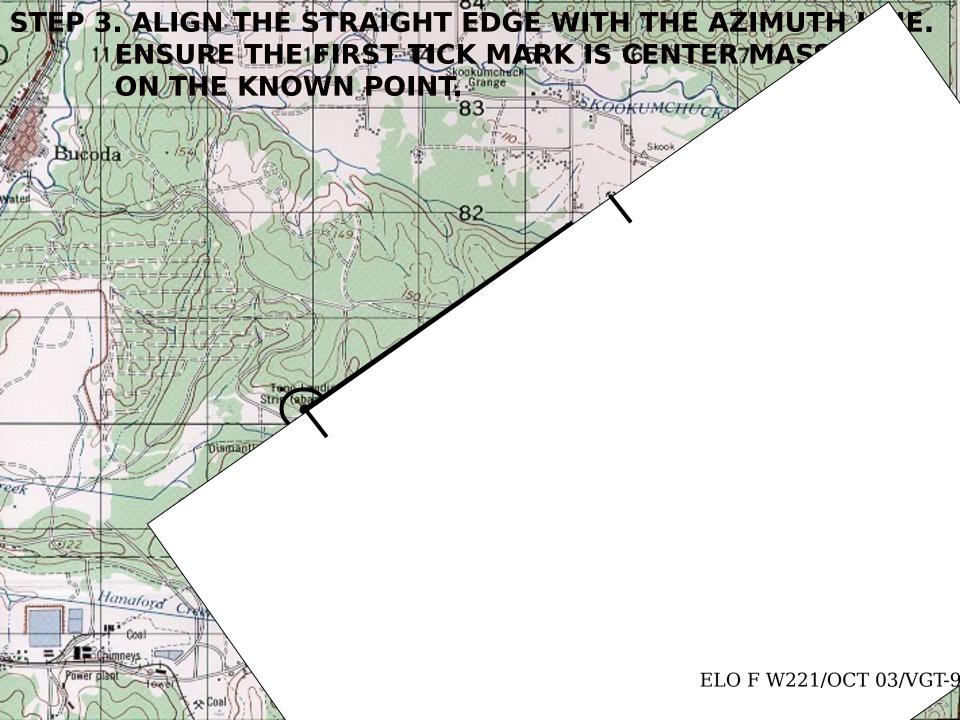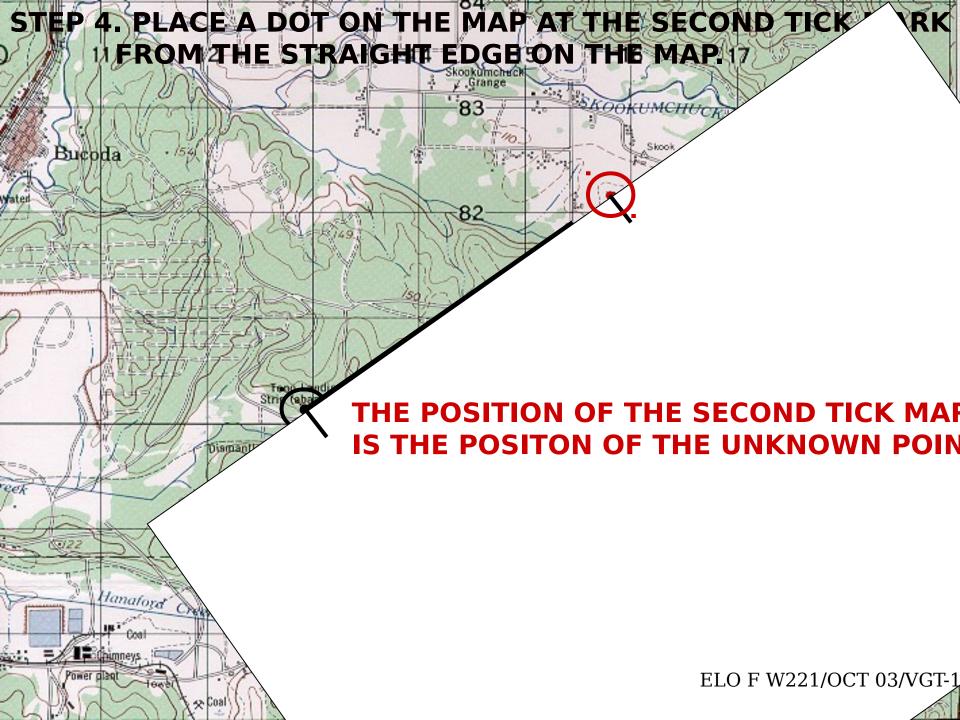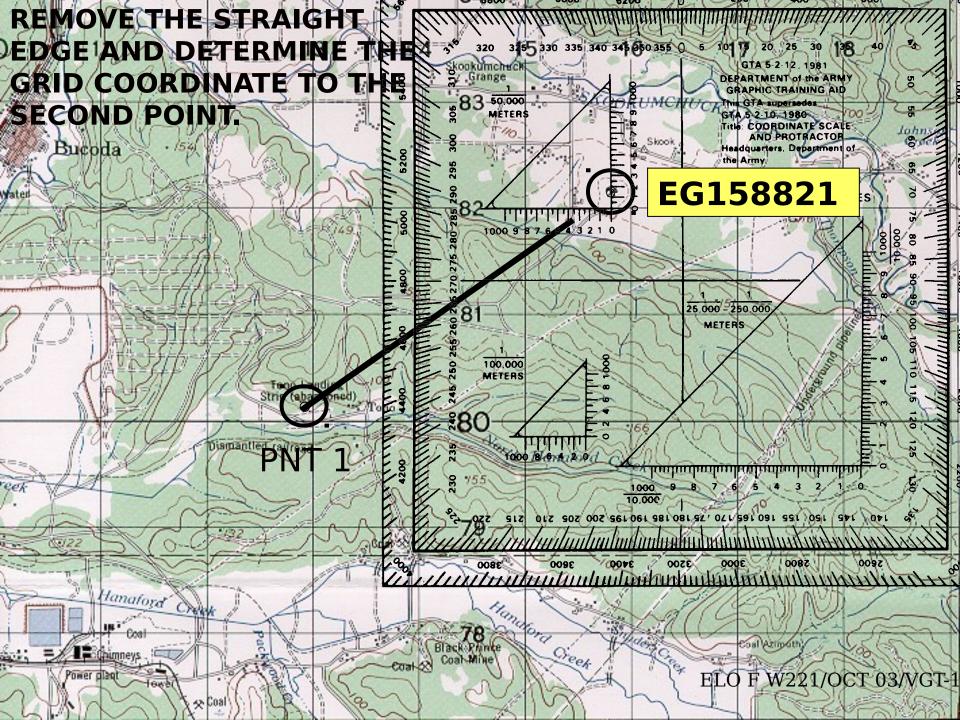1000   500   0   1000   2000   3000   4000   5000 Meters

ical Miles

**STEP 2. DETERMINE THE DESIRED DISTANCE TO MEASURE FR
    THE SCALE AND MARK THE PAPER AT THIS DISTANCE
    USING TICK MARKS.**

EXAMPLE: 3400 METERS

Scale 1:50,000

| 1000 | 500 | 0 | 1000 | 2000 | 3000 | 4000 | 5000 Meters |

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STEP 4. PLACE A DOT ON THE MAP AT THE SECOND TICK MARK FROM THE STRAIGHT EDGE ON THE MAP.

THE POSITION OF THE SECOND TICK MARK IS THE POSITON OF THE UNKNOWN POINT

REMOVE THE STRAIGHT EDGE AND DETERMINE THE GRID COORDINATE TO THE SECOND POINT.

EG158821

PNT 1

PRACTICAL EXERCISES

QUESTION: What are the polar coordinates plotted from the horizontal control station "Skook" in grid square EG1682 at an azimuth of 272 degrees and a distance of 3100 meters?

ANSWER: EG130826

QUESTION: What are the polar coordinates plotted from the water tower in grid square EG1185 at an azimuth of 46 degrees and a distance of 2000 meters?

ANSWER: EG12958695

QUESTION: What are the polar coordinates plotted from the water tower in grid square EG1185 at an azimuth of 81 degrees and a distance of 3150 meters?

ANSWER: EG14658605

QUESTIONS?

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TAKE A BREAK